

We claim:

1. A method for treating pain, the method comprising the step of peripheral
5 administration of a neurotoxin to a mammal, wherein the pain treated is not associated
with a muscle spasm.

2. The method of claim 1, wherein the neurotoxin comprises a neuronal binding
10 moiety which is substantially native to the neurotoxin.

3. The method of claim 1, wherein the neurotoxin is a botulinum toxin..

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4. The method of claim 1, wherein the neurotoxin is a botulinum toxin
selected from the group consisting of botulinum toxin types A, B, C₁, D, E, F and G.

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5. The method of claim 1, wherein the neurotoxin is botulinum toxin type A.

6. The method of claim 1, wherein the neurotoxin is a modified neurotoxin
having at least one amino acid deleted, modified or replaced.

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7. The method of claim 1, wherein the neurotoxin is made at least in part by
a recombinant process.

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8. The method of claim 1, wherein the neurotoxin is administered in an
amount between about 0.01 U/kg and about 35 U/kg.

9. The method of claim 1, wherein the pain is substantially alleviated for between about 1 month and about 6 months.

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10. The method of claim 1, wherein the peripheral administration step is carried out prior to an onset of a nociceptive event or syndrome experienced by the mammal.

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11. The method of claim 1, wherein the peripheral administration is carried out subsequent to an onset of a nociceptive event experienced by the mammal.

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12. A method for alleviating pain, the method comprising the step of peripheral administration of a botulinum toxin to a human patient, thereby alleviating pain, wherein the pain is not associated with a muscle disorder.

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13. The method of claim 12, wherein the neurotoxin is a botulinum toxin selected from the group consisting of botulinum toxin types A, B, C₁, D, E, F and G.

14. A method for treating a pain, the method comprising the step of peripheral
25 administration of a neurotoxin to a mammal, wherein the neurotoxin is a polypeptide comprising:

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a) a first amino acid sequence region comprising a wild type neuronal binding moiety, substantially completely derived from a neurotoxin selected from a group consisting botulinum toxin types A, B, C₁, D, E, F, G and mixtures thereof;

b) a second amino acid sequence region effective to translocate the

polypeptide or a part thereof across an endosome membrane; and

c) a third amino acid sequence region having therapeutic activity when released into a cytoplasm of a target cell,

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wherein the pain is not associated with a muscle spasm.

15. The method of claim 14, wherein the first amino acid sequence region of
10 the polypeptide comprises a carboxyl terminal of a heavy chain derived from the neurotoxin.

16. The method of claim 14, wherein the neurotoxin is botulinum toxin type A.
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17. The method of claim 14, wherein the second amino acid sequence region of the polypeptide comprises an amine terminal of a heavy chain derived from a neurotoxin selected from a group consisting of botulinum toxin types A, B, C₁, D, E, F, G
20 and mixtures thereof.

18. The method of claim 14, wherein the second amino acid sequence region of the polypeptide comprises an amine terminal of a toxin heavy chain derived from
25 botulinum toxin type A.

19. The method of claim 14, wherein the third amino acid sequence region of the polypeptide comprises a toxin light chain derived from a neurotoxin selected from a
30 group consisting of beratti toxin; butyricum toxin; tetani toxin; botulinum toxin types A, B, C₁, D, E, F, G and mixtures thereof.

20. The method of claim 14, wherein the third amino acid sequence region of the polypeptide comprises a toxin light chain derived from botulinum toxin type A.

5 21. A method for improving patient function, the method comprising the step of peripheral administration of a botulinum toxin to a patient experiencing a non-muscle disorder related pain, thereby improving patient function as determined by improvement in one or more of the factors of reduced pain, reduced time spent in bed, improve hearing, increased ambulation, healthier attitude and a more varied lifestyle.

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22. A method for treating post-operative pain, the method comprising the step of peripheral administration of an effective amount of a botulinum toxin before, during or immediately after a surgical procedure, thereby alleviating a post-operative pain,
15 wherein the surgical procedure is not carried out to treat a muscle spasm.

23 A method for treating a visceral pain the method comprising the step of non-systemic, local administration of an effective amount of a botulinum toxin, thereby alleviating a visceral pain.

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24. A method for treating pain, the method comprising the step of peripheral administration of a neurotoxin to a mammal, wherein the pain is not substantially due to a muscle spasm.

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25. The method of claim 24, wherein, the neurotoxin is a botulinum toxin.

30 26. The method of claim 24, wherein the pain is not secondary to a muscle spasm.

27. The method of claim 24, wherein the peripheral administration is by subcutaneous administration of the neurotoxin.

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